

Bulletin of the Agricultural Chemical Society of Japan.

ABSTRACTS

from

TRANSACTIONS published in JAPANESE

(Pages refer to the Japanese originals of this volume unless otherwise noticed)

Biochemical Studies on "Sotetsu" (*Cycas revoluta* Thunb.).

Part VII.—On the chemical constituents of the outer spermoderm of "Sotetsu"-seed. (pp. 89~93): By Kotaro NISHIDA. (Kagoshima Agricultural College. Received Dec. 14, 1936.)

Studies on Cytochrome C. Part I.—Is porphyrin C an amino acid porphyrin? (pp. 94~98): By Hideo KATAGIRI, Kosaku MASUDA and Takeshi HIMEMOTO. (Agr. Chemical Laboratory, Kyoto Imperial University. Received Dec. 23, 1936.)

Methods of preparation and purification of porphyrin C were discussed.

Porphyrin C was suggested not to be an amino acid porphyrin, since porphyrin C was directly obtained from blood haemin when glacial acetic and 20% sulphuric acids were added to haematin solution containing $\text{Na}_2\text{S}_2\text{O}_4$. Amyl alcohol was found to be a suitable solvent for the extraction of porphyrin C from neutral or slightly acid solutions.

Deutero-, meso- and haemato-porphyrins were obtained from porphyrin C.

Methods of preparation of cytochrome C was noted, and cytochrome C was found to contain iron and haematoporphyrin in the same molecular proportion when it was decomposed by 40% sulphuric acid.

Utilization of the Irradiated Mycelium of *Aspergillus Oryzae* for Poultry Feeding (III).—Influence for Moulting. (pp. 99~102): By Kisaburo YOKOYAMA and Ryohei TAKATA. (The Osaka Imperial University, Received Nov. 30, 1936.)

Studies on the Chemical Constituents of "Inekoji". Part IV.—The Organic Acids. (pp. 103~105): By Teijiro YABUTA and Yusuke SUMIKI. (Agricultural Chemical Laboratory, The Tokyo Imp. Univ., Received Nov. 20, 1936.)

Studies on the Chemical Constituents of "Inekoji". Part V.—The Red Pigment, Ustilaginoidin (II). (pp. 106~109): By Teijiro YABUTA and Yusuke SUMIKI. (Agricultural Chemical Laboratory, The Tokyo Imp. Univ., Received Nov. 20, 1936.)

Studies on the Chemical Constituents of "Inekoji". Part VI.
—The Red Pigment, Ustilaginoidin (III). (pp. 110~119): By Teijiro YABU-
TA, Yusuke SUMIKI and Hisanao IGARASHI. (The Tokyo Imperial University, Received
Nov. 25, 1936.)

**The toxic Effect of high Doses of Liver Oils and the Activity
of Yeast in Prevention of the Toxicity.** (pp. 120~147): By Masanobu
YOSIDA. (Kawai Institute, Tokyo, Received Dec. 4, 1936.)

The experiments were carried out concerning the toxicity of cod and
Aburatunozame (*Squalus wakiyae*) liver oil as well as the effect of yeast on
the harmful influence of large doses of liver oil.

On a diet containing 15 per cent of the liver oil the growth of rats was
greatly retarded. The higher unsaturated fatty acid was found to have
marked toxic effect, while the mixed fatty acid free from it, even in the
addition of 15 per cent to diets, indicated no sign of harmful effect to rats.
This injurious effect was prevented by administering yeast as in the case of
liver oil itself.

The unsaponifiable matter of liver oil was toxic at the level equivalent
to 10 per cent of the original oil to diets. The toxic action of unsaponifiable
matter was reduced by the treatment of heat, sunlight, charcoal and fullers'
earth respectively in parallel with the destruction of vitamin A. The un-
saponifiable matter of other fish liver oils incorporating in the same level of
vitamin A had the same toxic property. The toxic action of unsaponifiable
matter could not be counteracted by feeding the amount of yeast that was
enough to prevent the toxicity of liver oil.

Flavin concentrates prepared from yeast and liver were proved to be
effective in the prevention of the harmful action of liver oil and furthermore
the activity of crystalline flavin for the same purpose was confirmed. Vitamin
B₁ and the factors remaining in the liver and yeast extract after removal of
flavin were not efficacious for the harmful action of liver oil.

From above results it was recognized that the retardation of growth
produced by administering large doses of liver oil mainly depends upon its
higher unsaturated fatty acid and the active factor protecting against the
toxicity is flavin.

**Über die Verschiedene Eigenschaften von Aspergillusarten
(IV).** (S. 148~158): Von Y. TAKEDA u. O. TAKEUTI. (The Department of In-
dustry, Government Research Institute, Taiwan, Japan, Received Nov. 11, 1936.)